

DEPARTMENT OF TRANSPORTATION

ESC/OE MS #43

P.O. Box 942874

SACRAMENTO, CA 94274-0001



May 14, 1999

04-CC-680-39.4/40.1

04-006094

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in CONTRA COSTA COUNTY IN MARTINEZ FROM MOCOCO OVERHEAD TO BENICIA-MARTINEZ BRIDGE AND OVERHEAD.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on June 2, 1999.

This addendum is being issued to revise the Project Plans, the Notice to Contractors and Special Provisions, and the Proposal and Contract.

Project Plan Sheets 2 and 63 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

In the Special Provisions, Section 4, "Beginning of Work, Time of Completion and Liquidated Damages", the "working days" is changed from 360 days to 420 days.

In the Special Provisions, Section 5-1.11, "Payment for Extended Home Office Overhead," is replaced with the attached Section 5-1.11, "Overhead."

In the Special Provisions, Section 5-1.12, "Force Account Payment," is replaced as attached.

In the Special Provisions, Section 5-1.15, "Payments," the following sub-paragraph two is added:

"Electronic Mobil Daily Diary System Data Delivery \$6,000"

In the Special Provisions, Section 5-1.17. "Aerially Deposited Lead, General," the last paragraph is revised as follows:

"Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved, and no additional compensation will be allowed therefor."

In the Special Provisions, Section 5-1.18, "Contaminated Material, General," the second paragraph is revised as follows:

"Contamination, consisting of ore processing deposits and material containing metals leached from previous ore processing deposits, exists within the project limits. The ore processing deposits consist of slag from copper smelting operations and cinder from sulfur extraction operations. The slag deposits consist of dark gravel sized fused silicate material mixed with soil. The cinder deposits consist of purplish, sand-sized particles, mixed with soil. Locations of the slag and cinder deposits are shown on the plans. There may be other locations that contain these deposits. In addition, low level petroleum contamination exists in the material, and in the groundwater along portions of Mococo Road. Test results of samples collected from the slag and cinder deposits, areas containing metals leached from previous deposits, and petroleum contaminated materials are included in the "Materials Information." The complete report entitled "Benicia Martinez Toll Plaza Site Investigation Report" is available for inspection at the Department of Transportation, Toll Bridge Duty Senior's Desk, 111 Grand Avenue, Oakland, California, (510) 286-5549."

In the Special Provisions, Section 5-1.18A, "Asbestos-Containing Material," is added following Section 5-1.18, "Contaminated Material, General" as attached.

In the Special Provisions, Section 10-1.01, "Order of Work," the seventh paragraph is deleted.

In the Special Provisions, Section 10-1.02, "Water Pollution Control," is replaced as attached.

In the Special Provisions, Section 10-1.08, "Cooperation," the second paragraph is deleted.

In the Special Provisions, Section 10-1.09, "Progress Schedule (Critical Path)," is replaced as attached.

In the Special Provisions, the attached Section 10-1.09A, "Electronic Mobile Daily Dairy System Data Delivery," is added following Section 10-1.09, "Progress Schedule (Critical Path)."

In the Special Provisions, Section 10-1.13, "Maintaining Traffic," paragraph three is deleted.

In the Special Provisions, Section 10-1.13, "Maintaining Traffic," the second sentence of paragraph four is revised as follows:

"When using said haul roads, the Contractor shall close the number 3 lane of northbound Route 680."

In the Special Provisions, Section 10-1.13, "Maintaining Traffic," Lane Closure Chart Number 1 is replaced with the attached Lane Closure Charts Number 1 and 1A.

In the Special Provisions, Section 10-1.14, "Lane Closure Requirements and Conditions," the following is added after paragraph eleven:

"For each 10-minute interval, or fraction thereof past the time specified to completely reopen the highway or freeway lanes, ramps or connectors, the Department will deduct \$1,100 per interval from moneys due or that may become due the Contractor under the contract."

In the Special Provisions, Section 10-1.23, "Earthwork," the following is added after the first paragraph:

"Foundation recommendations for Contract 04-006041, including logs of test borings, are available at the Department of Transportation, Toll Bridge Duty Senior's Desk, 111 Grand avenue, Oakland, California (510) 286-5540."

In the Special Provisions, Section 10-1.32, "Aggregate Base," is replaced as attached.

In the Special Provisions, Section 10-1.49A, "Slope Protection," is added following Section 10-1.49, "Rock Energy Dissipater," as follows:

"10-1.49A SLOPE PROTECTION

Slope protection shall conform to the provisions in Section 72, "Slope Protection," of the Standard Specifications."

In the Proposal and Contract, the Engineer's Estimate Items 43 and 101 are revised, and Items 102 and 103 are added as attached.

To Proposal and Contract book holders:

- REPLACE PAGES 5 AND 8 OF THE ENGINEER'S ESTIMATE IN THE PROPOSAL WITH THE ATTACHED REVISED PAGES 5 AND 8 OF THE ENGINEER'S ESTIMATE. THE REVISED ENGINEER'S ESTIMATE IS TO BE USED IN THE BID.
- ATTACHED ARE COPIES OF AN ADDITIONAL MATERIAL INFORMATION AND THE REGIONAL WATER QUALITY CONTROL BOARD "NPDES" PERMIT.
- INDICATE RECEIPT OF THIS ADDENDUM BY FILLING IN THE NUMBER OF THIS ADDENDUM IN THE SPACE PROVIDED ON THE SIGNATURE PAGE OF THE PROPOSAL.
- Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.
- Inform subcontractors and suppliers as necessary.

This office is sending this addendum by UPS overnight mail to Proposal and Contract book holders to ensure that each receives it.

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

NICK YAMBAO, Chief
Plans, Specifications &
Estimates Branch
Office of Office Engineer

Attachments

5-1.11 OVERHEAD

The Contractor will be compensated for overhead in accordance with these special provisions.

Attention is directed to "Force Account Payment" and "Progress Schedule (Critical Path)" of these special provisions.

Section 9-1.08, "Adjustment of Overhead Costs," of the Standard Specifications shall not apply.

Time related overhead shall consist of those overhead costs, including field and home office overhead, that are in proportion to the time required to complete the work.

The quantity of time related overhead to be measured for payment will be the number of working days specified in "Beginning of Work, Time of Completion and Liquidated Damages" of these special provisions, adjusted only as a result of suspensions and adjustments of time which revise the current contract completion date and which are also any of the following:

1) suspensions of work ordered in accordance with Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications, except:

- a) suspensions ordered due to the failure on the part of the Contractor to carry out orders given, or to perform any provision of the contract; and
- b) suspensions ordered due to unsuitable weather conditions;

2) extensions of time granted by the State in accordance with the provisions of the fifth paragraph of Section 8-1.07, "Liquidated Damages," of the Standard Specifications; or

3) reductions in contract time set forth in approved contract change orders, in accordance with Section 4-1.03, "Changes," of the Standard Specifications.

The contract price paid for time related overhead shall include full compensation for time related overhead measured for payment as specified above, incurred by the Contractor and by any joint venture partner, subcontractor, supplier or other party associated with the Contractor.

No adjustment in compensation will be made for any increase or decrease in the quantities of time related overhead required, regardless of the reason for the increase or decrease. The provisions in Sections 4-1.03B, "Increased or Decreased Quantities" and 4-1.03C, "Changes in Character of the Work," of the Standard Specifications, shall not apply to time related overhead.

For progress payment purposes, the number of working days to be paid for time related overhead in each monthly estimate will be the number of working days specified above to be measured for payment that the Contractor performed work on the current controlling operation or operations as specified in Section 8-1.06, "Time of Completion," of the Standard Specifications. Working days specified above to be measured for payment, on which the Contractor did not perform work on the controlling operation or operations will be measured and included for payment in the first estimate made in accordance with Section 9-1.07, "Payment After Acceptance," of the Standard Specifications.

Full compensation for overhead other than time related overhead measured and paid for as specified above, and other than overhead costs for extra work performed pursuant to Section 4-1.03D of the Standard Specifications, shall be considered as included in the various items of work and no additional compensation will be allowed therefor.

REPLACED PER ADDENDUM NO. 1 DATED MAY 14, 1999

5-1.12 FORCE ACCOUNT PAYMENT

The second, third and fourth paragraphs of Section 91.03A, "Work Performed by Contractor," of the Standard Specifications, shall not apply.

To the total of the direct costs computed as provided in Sections 9-1.03A(1), "Labor," 9-1.03A(2), "Materials," and 9-1.03A(3), "Equipment Rental," of the Standard Specifications, there will be added a markup of 25 percent to the cost of labor, 10 percent to the cost of materials, and 10 percent to the equipment rental.

The above markups, together with payments made for time related overhead pursuant to "Overhead" of these special provisions, shall constitute full compensation for all overhead costs for work performed on a force account basis. These overhead costs shall be deemed to include all items of expense not specifically designated as cost or equipment rental in Sections 9-1.03A(1), "Labor," 9-1.03A(2), "Materials," and 9-1.03A(3), "Equipment Rental," of the Standard Specifications. The total payment made as provided above and in the first paragraph of Section 9-1.03A, "Work Performed by Contractor," shall be deemed to be the actual cost of the work performed on a force account basis, and shall constitute full compensation therefor.

When extra work to be paid for on a force account basis is performed by a subcontractor, approved in accordance with the provisions in Section 8-1.01, "Subcontracting," of the Standard Specifications, an additional markup of 5 percent will be added to the total cost of said extra work including all markups specified in this section "Force Account Payment". Said additional 5 percent markup shall reimburse the Contractor for additional administrative costs, and no other additional payment will be made by reason of performance of the extra work by a subcontractor.

REPLACED PER ADDENDUM NO. 1 DATED MAY 14, 1999

5-1.18A ASBESTOS-CONTAINING MATERIAL

Asbestos-containing material, as defined in Section 1529, "Asbestos," of the Construction Safety Orders, Title 8, of the California Code of Regulations, is present within the project limits. The 152-mm City of Martinez water main to be removed, as specified on the plans, is asbestos-containing material.

Attention is directed to Section 7-1.06, "Safety and Health Provisions," of the Standard Specifications. Work practices and worker health and safety during any work that results in disturbance of asbestos-containing material shall conform to Section 1529, "Asbestos," of the Construction Safety Orders, Title 8, of the California Code of Regulations. The Contractor shall obtain all certifications and registrations required to do the work and certify in writing to the Engineer that the personnel performing the work have completed a training program appropriate for the work involved. Written notification of exposure monitoring results shall be submitted to the Engineer upon completion of the monitoring. A copy of any required written certification of the adequacy of alternative work practices shall be submitted to the Engineer before performing any work.

The requirements of subsection (d), "Multi-employer worksites," of Section 1529, "Asbestos," of the Construction Safety Orders, Title 8, of the California Code of Regulations shall be observed during performance of the work. This shall not be construed as relieving the Contractor from the Contractor's responsibilities as provided in Section 8-1.01, "Subcontracting," of the Standard Specifications.

Any friable asbestos-containing material or non-friable asbestos-containing material damaged during the work, so that it becomes friable or is in a finely divided or powdered state, shall be wetted and sealed in leak-tight, non-returnable containers, such as 2 bags of 0.15 mm plastic, cartons, drums, or cans. Bulk friable asbestos-containing material that will not fit into containers without additional breaking shall be double-wrapped, sealed, and wetted. Trailers, drop-boxes, or other vehicles used for transport of bulk materials shall be lined with plastic sheeting and covered with a tarp. Each container and wrapped material shall be properly labeled, manifested and transported to a facility permitted to accept such material. The Engineer will obtain the United States Environmental Protection Agency Identification Number and sign all manifests as the Generator.

Any other material that has been in contact with friable, finely divided, or powdered asbestos-containing material shall be cleaned thoroughly before removal from the work area. If the Contractor chooses not to clean the material, it shall be handled in accordance with the provisions for bulk friable asbestos-containing material.

Full compensation for conforming to the requirements of this section shall be considered as included in the contract prices paid for the various items of work involved, and no additional compensation will be allowed therefor.

10-1.02 WATER POLLUTION CONTROL

Water pollution control work shall conform to the requirements in Section 7-1.01G, "Water Pollution," of the Standard Specifications and these special provisions.

This project shall conform to the requirements of Permit No.CAS029998 issued by the San Francisco Bay Regional (Region 2)Water Quality Control Board. This permit, hereafter referred to as the "Permit," regulates storm water discharges associated with construction activities.

Water pollution control work shall conform to the requirements in the Construction Contractor's Guide and Specifications of the Caltrans Storm Water Quality Handbooks, dated April 1997, and addenda thereto issued up to and including the date of advertisement of the project, hereafter referred to as the "Handbook". Copies of the Handbook may be obtained from the Department of Transportation, Material Operations Branch, Publication Distribution Unit, 1900 Royal Oaks Drive, Sacramento, California 95815, Telephone: (916) 445-3520. In addition, a Conceptual Storm Water Pollution Prevention Plan, hereafter referred to as the "CSWPPP," has been prepared for this project by the Department. The CSWPPP shall be used as a reference tool for developing the contract specific Storm Water Pollution Prevention Plan. This document shall be used for informational purposes only.

Copies of the Handbook, the CSWPPP, and the Permit are also available for review at 111 Grand Avenue Oakland, California 94601. Please call the Toll Bridge Duty Senior, telephone number (510) 286-5549, to reserve a copy of the documents at least 24 hours in advance.

The Contractor shall become fully informed of and comply with the applicable provisions of the Handbook, Permit and Federal, State and local regulations that govern the Contractor's operations and storm water discharges from both the project site and areas of disturbance outside the project limits during construction. The Contractor shall maintain a copy of the Permit at the project site and shall make the Permit available during construction activities.

Unless arrangements for disturbance of areas outside the project limits are made by the Department and made part of the contract, it is expressly agreed that the Department assumes no responsibility to the Contractor or property owner whatsoever with respect to any arrangements made between the Contractor and property owner to allow disturbance of areas outside the project limits.

The Contractor shall be responsible for the costs and for any liability imposed by law as a result of the Contractor's failure to comply with the requirements set forth in this section "Water Pollution Control", including but not limited to, compliance with the applicable provisions of the Handbook, Permit and Federal, State and local regulations. For the purposes of this paragraph, costs and liabilities include, but are not limited to, fines, penalties and damages whether assessed against the State or the Contractor, including those levied under the Federal Clean Water Act and the State Porter Cologne Water Quality Act.

In addition to any remedy authorized by law, so much of the money due the Contractor under the contract that shall be considered necessary by the Department may be retained by the State of California until disposition has been made of the costs and liabilities.

The retention of money due the Contractor shall be subject to the following:

1. The Department will give the Contractor 30 days notice of its intention to retain funds from any partial payment which may become due to the Contractor prior to acceptance of the contract. Retention of funds from any payment made after acceptance of the contract may be made without prior notice to the Contractor.
2. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 9-1.06, "Partial Payments," of the Standard Specifications.
3. If the Department has retained funds and it is subsequently determined that the State is not subject to the costs and liabilities in connection with the matter for which the retention was made, the Department shall be liable for interest on the amount retained at the legal rate of interest for the period of the retention.

Conformance with the requirements of this section "Water Pollution Control" shall not relieve the Contractor from the Contractor's responsibilities, as provided in Sections 7-1.11, "Preservation of Property," 7-1.121, "Indemnification," and 7-1.122, "Insurance," of the Standard Specifications.

The Contractor shall, at reasonable times, allow authorized agents of the California Regional Water Quality Control Board, State Water Resources Control Board, U. S. Environmental Protection Agency and local storm water management agency, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the construction site and the Contractor's facilities pertinent to the work;
2. Have access to and copy any records that must be kept as specified in the Permit;
3. Inspect the construction site and related soil stabilization practices and sediment control measures; and
4. Sample or monitor for the purpose of ensuring compliance with the Permit.

REPLACED PER ADDENDUM NO. 1 DATED MAY 14, 1999

The Contractor shall notify the Engineer immediately upon request from regulatory agencies to enter, inspect, sample, monitor or otherwise access the project site or the Contractor's records.

STORM WATER POLLUTION PREVENTION PLAN PREPARATION, APPROVAL AND UPDATES

As part of the water pollution control work, a Storm Water Pollution Prevention Plan, hereafter referred to as the "SWPPP," is required for this contract. The SWPPP shall conform to the requirements in Section 7-1.01G, "Water Pollution," of the Standard Specifications, the requirements in the Handbook, the requirements of the Permit and these special provisions. Upon the Engineer's approval of the SWPPP, the SWPPP shall be deemed to fulfill the requirements of Section 7-1.01G, "Water Pollution," of the Standard Specifications for development and submittal of a Water Pollution Control Program. The requirement to waive the submission of a written water pollution control program as provided for in Section 7-1.01G, "Water Pollution," of the Standard Specifications shall not be allowed.

No work having potential to cause water pollution, as determined by the Engineer, shall be performed until the SWPPP has been approved by the Engineer.

Within 30 days after the approval of the contract, the Contractor shall submit 4 copies of the SWPPP to the Engineer. The Contractor shall allow 15 days for the Engineer to review the SWPPP. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the SWPPP within 7 days of receipt of the Engineer's comments and shall allow 7 days for the Engineer to review the revisions. Upon the Engineer's approval of the SWPPP, 4 additional copies of the SWPPP, incorporating the required changes, shall be submitted to the Engineer. In order to allow construction activities to proceed, the Engineer may conditionally approve the SWPPP while minor revisions are being completed.

The objectives of the SWPPP shall be to identify pollution sources that may adversely affect the quality of storm water discharges associated with the project and to identify, construct, implement and maintain water pollution control measures, hereafter referred to as control measures, to reduce to the extent feasible pollutants in storm water discharges from the construction site both during and after construction is completed under this contract.

The SWPPP shall incorporate control measures in the following categories:

1. Soil stabilization practices;
2. Sediment control practices;
3. Sediment tracking control practices;
4. Wind erosion control practices; and
5. Non-storm water management and waste management and disposal control practices.

Specific objectives and minimum requirements for each category of control measures are contained in the Handbook.

The Contractor shall consider the objectives and minimum requirements presented in the Handbook for each of the above categories. When minimum requirements are listed for any category, the Contractor shall incorporate into the SWPPP, and implement on the project the minimum control measures listed below. In addition, the Contractor shall consider other control measures presented in the Handbook and shall incorporate into the SWPPP and implement on the project the control measures necessary to meet the objectives of the SWPPP. The Contractor shall document the selection process in accordance with the procedure specified in the Handbook. The following special minimum requirements are established:

Category	Minimum Requirement(s)
Soil Stabilization Practices	CD22 Scheduling, CD23 Preservation of Existing Vegetation, CD26B Geotextiles, Mats/Plastic Covers & Erosion Control Blankets, CD29A Stabilized Construction Entrance, and CD29B Stabilized Construction Roadway
Wind Erosion Control Practices	CD26B Geotextiles, Mats/Plastic Covers & Erosion Control Blankets
Sediment Control Practices	CD39 Brush or Rock Filter, and CD41 Sediment Traps
Nonstorm Water Management and Waste Management and Disposal Practices	CD7 Dewatering, CD8 Paving Operations, CD10 Material Delivery and Storage, CD11 Material Use, CD12 Spill Prevention and Control, CD13 Solid Waste Management, CD16 Concrete Waste Management, CD17 Sanitary/Septic Waste Management, CD18 Vehicle and Equipment Cleaning, CD19 Vehicle and Equipment Fueling, CD20 Vehicle and Equipment Maintenance, CD22 Scheduling, and CD44 Illicit Discharge/Illegal Dumping Reporting

The following contract items of work, as shown on the project plans, shall be incorporated into the SWPPP as critical temporary control measures:

- Temporary Erosion Control
- Temporary Stockpile Cover
- Temporary Drainage Inlet Protection
- Temporary Silt Fence

The Contractor shall consider other control measures to supplement the critical temporary control measures when necessary to meet the pollution control objectives of the SWPPP.

The following contract items of work, as shown on the project plans, shall be incorporated into the SWPPP as permanent post-construction control measures: Fiber Roll Check Dam, Erosion Control (Blanket). These control measures shall be utilized as construction period control measures. Attention is directed to "Order of Work" of these special provisions. The Contractor shall consider other control measures to supplement these permanent, post-construction control measures when necessary to meet the pollution control objectives of the SWPPP. The Contractor shall maintain and protect the permanent control measures throughout the duration of the project and shall restore these controls to the lines and grades shown on the plans prior to acceptance of the project.

The SWPPP shall include, but not be limited to, the following items as described in the Handbook and Permit:

1. Source Identification;
2. Erosion and Sediment Controls;
3. Non-Storm Water Management;
4. Waste Management and Disposal;
5. Maintenance, Inspection and Repair;
6. Training;
7. List of Contractors and Subcontractors;
8. Post-Construction Storm Water Management;
9. Preparer;
10. Amendment Log;
11. Copy of the NPDES CAS029998 local permit;
12. BMP Consideration Checklist;
13. SWPPP Checklist;
14. Schedule of Values; and
15. Water Pollution Control Drawings.

The Contractor shall amend the SWPPP, graphically and in narrative form, whenever there is a change in construction activities or operations which may affect the discharge of significant quantities of pollutants to surface waters, ground waters, municipal storm drain systems, or when deemed necessary by the Engineer. The SWPPP shall also be amended if it is in violation of any condition of the Permit, or has not effectively achieved the objective of reducing pollutants in storm water discharges. Amendments shall show additional control measures or revised operations, including those in areas not shown in the initially approved SWPPP, which are required on the project to control water pollution effectively. Amendments to the SWPPP shall be submitted for review and approval by the Engineer in the same manner specified for the initially approved SWPPP. Approved amendments shall be dated and logged in the SWPPP. Upon approval of the amendment, the Contractor shall implement the additional control measures or revised operations.

The Contractor shall keep a copy of the SWPPP and approved amendments at the project site. The SWPPP shall be made available upon request of a representative of the Regional Water Quality Control Board, State Water Resources Control Board, U.S. Environmental Protection Agency or local storm water management agency. Requests by the public shall be directed to the Engineer.

By June 15 of each year, the Contractor shall submit an annual certification to the Engineer stating compliance with the requirements governing the Permit. Throughout the duration of the contract, if the project is determined to be in non-compliance at any time by the Engineer, the Contractor shall submit a written report to the Engineer within 48 hours of identification of the non-compliance. The report shall specify the time and nature of the non-compliance and include a course of action to correct the deficiency. Non-compliance shall include, but not be limited to, any of the following conditions:

1. Any written notices, violations, or orders presented by a regulatory agency.
2. Control measures in the field are not implemented or maintained as provided for in the approved Storm Water Pollution Prevention Plan and amendments.
3. The Contractor fails to respond to written requests for corrective actions.
4. The Contractor refuses to submit an annual certification.
5. Contractor discharges unauthorized materials, residues, or liquids to drainage conveyances or water bodies.

If the project is in non-compliance, the Engineer may impose one or more of the following actions:

1. Direct the Contractor to revise the operations and water pollution control program and SWPPP.
2. No further work on any contract item out of compliance until the water pollution control measures are adequate and the water pollution control program has been amended and acceptable to the Engineer.
3. No further work or the beginning of any new work on any contract items until an inspection is conducted through the work area to determine the adequacy of measures deployed to address all other work.
4. Notification to the Regional Water Quality Control Board (RWQCB) of the non-compliance status.
5. Payment retention as provided for elsewhere in these special provisions.

REPLACED PER ADDENDUM NO. 1 DATED MAY 14, 1999

SCHEDULE OF VALUES

The Contractor shall submit with the SWPPP, for approval by the Engineer, a schedule of values detailing the cost breakdown of the contract lump sum item for water pollution control. The cost breakdown shall include both the special minimum requirements required by the Department and those selected by the Contractor for this project. The combined requirements shall be considered as items of work as part of the lump sum bid for water pollution control. The schedule of values shall reflect the total items of work, including both those required by the Department and those selected by the Contractor. The Contractor shall indicate quantities, values and amounts for all control measures shown in the schedule of values, except for critical temporary controls and permanent control measures which are shown on the project plans and for which there is a contract item of work. Adjustments in the items of work and quantities listed in the schedule of values shall be made when required to address approved amendments to the SWPPP.

The sum of the amounts for the units of work listed in the schedule of values shall be equal to the contract lump sum price for water pollution control.

If approved in writing by the Engineer, the schedule of values will be used to determine progress payments for water pollution control during the progress of the work, and as the basis for calculating any adjustment in compensation for the contract item for water pollution control due to changes in the work ordered by the Engineer.

SWPPP IMPLEMENTATION

Upon approval of the SWPPP, the Contractor shall be responsible throughout the duration of the project for installing, constructing, inspecting and maintaining the control measures included in the SWPPP and any amendments thereto and for removing and disposing of temporary control measures. Unless otherwise directed by the Engineer or specified in these special provisions, the Contractor's responsibility for SWPPP implementation shall continue throughout any temporary suspension of work ordered in accordance with Section 81.05, "Temporary Suspension of Work," of the Standard Specifications. Requirements for installation, construction, inspection, maintenance, removal and disposal of control measures are specified in the Handbook and these special provisions.

Soil stabilization practices and sediment control measures, including minimum requirements, shall be provided throughout the winter season, defined as between October 1 and May 1.

Implementation of soil stabilization practices and sediment control measures for soil-disturbed areas of the project site shall be completed, except as provided for below, no later than 20 days prior to the beginning of the winter season or upon start of applicable construction activities for projects which begin either during or within 20 days of the winter season.

Throughout the winter season, the active, soil-disturbed area of the project site shall be no more than 1 hectare. The Engineer may approve, on a case-by-case basis, expansions of the active, soil-disturbed area limit. The Contractor shall demonstrate the ability and preparedness to fully deploy soil stabilization practices and sediment control measures to protect soil-disturbed areas of the project site before the onset of precipitation. The Contractor shall maintain a quantity of soil stabilization and sediment control materials on site equal to 125 percent of that sufficient to protect unprotected, soil-disturbed areas on the project site and shall maintain a detailed plan for the mobilization of sufficient labor and equipment to fully deploy control measures required to protect unprotected, soil-disturbed areas on the project site prior to the onset of precipitation. The Contractor shall include a current inventory of control measure materials and the detailed mobilization plan as part of the SWPPP.

Throughout the winter season, soil-disturbed areas of the project site shall be considered to be nonactive whenever soil disturbing activities are expected to be discontinued for a period of 5 or more days and the areas are protected with soil stabilization and sediment control practices. Areas that will become nonactive either during the winter season or within 20 days thereof shall be fully protected with soil stabilization practices and sediment control measures within 10 days of the discontinuance of soil disturbing activities or prior to the onset of precipitation, whichever is first to occur.

Throughout the winter season, active soil-disturbed areas of the project site shall be fully protected at the end of each day with soil stabilization practices and sediment control measures unless fair weather is predicted through the following work day. The weather forecast shall be monitored by the Contractor on a daily basis. The National Weather Service forecast shall be used, or an alternative weather forecast proposed by the Contractor may be used if approved by the Engineer. If precipitation is predicted prior to the end of the following work day, construction scheduling shall be modified, as required, and the Contractor shall deploy functioning control measures prior to the onset of the precipitation.

The Contractor shall implement, year-round and throughout the duration of the project, control measures included in the SWPPP for sediment tracking, wind erosion, non-storm water management and waste management and disposal.

The Engineer may order the suspension of construction operations which create water pollution if the Contractor fails to conform to the requirements of this section "Water Pollution Control" as determined by the Engineer.

MAINTENANCE

To ensure the proper implementation and functioning of control measures, the Contractor shall regularly inspect and maintain the construction site for the control measures identified in the SWPPP. The Contractor shall identify corrective actions and time frames to address any damaged measures or reinitiate any measures that have been discontinued.

The construction site inspection checklist provided in the CSWPPP shall be used to ensure that the necessary measures are being properly implemented, and to ensure that the control measures are functioning adequately. The Contractor shall submit one copy of each site inspection record to the Engineer.

Inspections of the construction site shall be conducted by the Contractor to identify deficient measures, as follows:

1. Prior to a forecast storm;
2. After any precipitation which causes runoff capable of carrying sediment from the construction site;
3. At 24 hour intervals during extended precipitation events; and
4. Routinely, at a minimum of once every week.

If the Contractor or the Engineer identifies a deficiency in the deployment or functioning of an identified control measure, the deficiency shall be corrected by the Contractor immediately, or by a later date and time if requested by the Contractor and approved by the Engineer in writing, but not later than the onset of subsequent precipitation events. The correction of deficiencies shall be at no additional cost to the State. When any deficiency is not corrected within the timeframe prescribed by the Engineer, then the project shall be in non-compliance.

PAYMENT

The contract lump sum price paid for prepare storm water pollution prevention plan shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in developing, preparing, obtaining approval of, revising and amending the SWPPP as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Attention is directed to Sections 9-1.06, "Partial Payments," and 9-1.07, "Payment After Acceptance," of the Standard Specifications. Payments for prepare storm water pollution prevention plan will be made as follows:

1. After the SWPPP has been approved by the Engineer, 75 percent of the contract item price for prepare storm water pollution prevention plan will be included in the monthly partial payment estimate; and
2. After acceptance of the contract pursuant to Section 7-1.17, "Acceptance of Contract," the remaining 25 percent of the contract item price for prepare storm water pollution prevention plan will be made in accordance with Section 9-1.07.

The contract lump sum price paid for water pollution control shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in installing, constructing, maintaining, removing and disposing of control measures, except those shown on the project plans and for which there is a contract item of work, and excluding developing, preparing, obtaining approval of, revising and amending the SWPPP, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Changes in control measures required by an approved amendment to the SWPPP, except changes to those control measures shown on the project plans and for which there is a contract item of work, will be considered extra work, in accordance with Section 4-1.03D of the Standard Specifications and the following:

If the control measure is listed in the approved SWPPP schedule of values, an adjustment in compensation for the contract item for water pollution control will be made by applying the increase or decrease in quantities to the approved schedule of values. No adjustment of compensation will be made to the unit price listed for any item in the schedule of values due to any increase or decrease in the quantities, regardless of the reason for the increase or decrease. The provisions in Section 4-1.03B, "Increased or Decreased Quantities," shall not apply to items listed in the schedule of values.

If the control measure is not listed in the approved SWPPP schedule of values, payment will be made by force account.

Those control measures which are shown on the project plans and for which there is a contract item of work will be measured and paid for as that item of work.

The Engineer will retain an amount equal to 25 percent of the estimated value of the contract work performed during estimate periods in which the Contractor fails to conform to the requirements of this section "Water Pollution Control" as determined by the Engineer.

Retentions for failure to conform to the requirements of this section "Water Pollution Control" shall be in addition to the other retentions provided for in the contract. The amounts retained for failure of the Contractor to conform to the requirements of this section will be released for payment on the next monthly estimate for partial payment following the date that an approved SWPPP has been implemented and maintained, and water pollution is adequately controlled, as determined by the Engineer.

WATER POLLUTION CONTROL SCHEDULE OF VALUES

Contract No. 04-006094

UNIT DESCRIPTION	UNIT	QUANTITY	VALUE	AMOUNT

TOTAL _____

10-1.09 PROGRESS SCHEDULE (CRITICAL PATH)

Progress schedules will be required for this contract. Progress schedules shall utilize the Critical Path Method (CPM).

DEFINITIONS.—The following definitions apply to this section "Progress Schedule (Critical Path)":

- 1) Activity: Any task, or portion of a project, which takes time to complete.
- 2) Baseline Schedule: The initial CPM schedule representing the Contractor's original work plan, as accepted by the Engineer.
- 3) Controlling Operation: The activity considered at the time by the Engineer, within that series of activities defined as the critical path, which, if delayed or prolonged, will delay the time of completion of the contract.
- 4) Critical Path: The series of activities which determines the earliest completion of the project (Forecast completion Date). Those activities with float less than or equal to a specified value, often zero.
- 5) Critical Path Method: A mathematical calculation to determine the earliest completion of the project represented by a graphic representation of the sequence of activities that shows the interrelationships and interdependencies of the elements composing a project.
- 6) Current Contract Completion Date: The extended date for completion of the contract shown on the weekly statement of working days furnished by the Engineer in accordance with Section 8-1.06, "Time of Completion," of the Standard Specifications.
- 7) Early Completion Time: The difference in time between the current contract completion date and the Contractor's scheduled early forecast completion date as shown on the accepted baseline schedule, or schedule updates and revisions.
- 8) Float: The amount of time between the early start date and the late start date, or the early finish date and the late finish date, of any activity or group of activities in the network.
- 9) Forecast Completion Date: The completion date of the last scheduled work activity identified on the critical path.
- 10) Fragnet: A section or fragment of the network diagram comprised of a group of activities.
- 11) Free Float: The amount of time an activity can be delayed before affecting a subsequent activity.
- 12) Hammock Activity: An activity added to the network to span an existing group of activities for summarizing purposes.
- 13) Milestone: A marker in a network, which is typically used to mark a point in time or denote the beginning or end of a sequence of activities. A milestone has zero duration, but will otherwise function in the network as if it were an activity.
- 14) Revision: A change in the future portion of the schedule that modifies logic, adds or deletes activities, or alters activities, sequences, or duration's.
- 15) Tabular Listing: A report showing schedule activities, their relationships, duration's, scheduled and actual dates, and float.
- 16) Total Float: The amount of time that an activity may be delayed without affecting the total project duration of the critical path.
- 17) Update: The modification of the CPM progress schedule through a regular review to incorporate actual progress to date by activity, approved time adjustments, and projected completion dates.

PRECONSTRUCTION SCHEDULING CONFERENCE.—The Engineer will schedule and conduct a Preconstruction Scheduling Conference with the Contractor's Project Manager and Construction Scheduler within seven days after the bidder has received the contract for execution. At this meeting, the requirements of this section of the special provisions will be reviewed with the Contractor. The Contractor shall be prepared to discuss its schedule methodology, proposed sequence of operations, the activity identification system for labeling all work activities, and any deviations it proposes to make from the Stage Construction Plans. The Engineer shall submit a diskette of a scheduling shell project, displaying a generic activity code dictionary consisting of fields populated with the Caltrans Scope Breakdown Structure Code. The Contractor shall utilize these codes, and may add other codes as necessary, to group and organize the work activities. Periodically the Engineer may request the Contractor to utilize additional filters, layouts or activity codes to be able to further group or summarize work activities.

Also, the Engineer and the Contractor shall review the requirements for all submittals applicable to the contract and discuss their respective preparation and review duration's. All submittals are to be reflected on the Interim Baseline Schedule and the Baseline Schedule.

REPLACED PER ADDENDUM NO. 1 DATED MAY 14, 1999

INTERIM BASELINE SCHEDULE.—Within 15 days after approval of the contract, the Contractor shall submit to the Engineer an interim baseline project schedule which will serve as the progress schedule for the first 120 days of the project, or until the baseline schedule is accepted, whichever is sooner. The interim baseline schedule shall utilize the critical path method. The interim baseline schedule shall depict how the Contractor plans to perform the work for the first 120 days of the contract. Additionally, the interim baseline schedule shall show all submittals required early in the project, and shall provide for all permits, and other non-work activities necessary to begin the work. The interim baseline schedule submittal shall include a 3 1/2 inch floppy diskette which contains the data files used to generate the schedule.

The Engineer shall be allowed 10 days to review the schedule and to provide comments, including the Contractor's application of the supplied scope breakdown structure. The interim baseline schedule does not require Caltrans approval but all comments are to be implemented into the baseline schedule. Resubmittal of the interim baseline schedule is not required. Late review of the interim baseline schedule shall not restrain the submittal of the baseline schedule.

BASELINE SCHEDULE.—Within 30 days after approval of the contract, the Contractor shall submit to the Engineer a baseline project schedule including the incorporation of all comments provided to the interim baseline schedule. The baseline project schedule shall have a data date of the day prior to the first working day of the contract and shall not include any completed work to-date. The baseline progress schedule shall meet interim target dates, milestones, stage construction requirements, internal time constraints, show logical sequence of activities, and must not extend beyond the number of days originally provided for in the contract.

The baseline CPM schedule submitted by the Contractor shall have a sufficient number of activities to assure adequate planning of the project and to permit monitoring and evaluation of progress and the analysis of time impacts. The baseline schedule shall depict how the Contractor plans to complete the whole work involved, and shall show all activities that define the critical path.

The baseline progress schedule shall be supplemented with resource allocations for every activity, to a level of detail that facilitates report generation based on labor craft and equipment class for the Contractor and subcontractors. The Contractor shall use average composite crews to display the labor loading of on-site construction activities. The Contractor shall optimize and level labor to reflect a reasonable plan for accomplishing the work of the contract and to assure that resources are not duplicated in concurrent activities. The Contractor shall require each subcontractor to submit in writing a statement certifying that the subcontractor has concurred with the Contractor's CPM, including major updates, and that the subcontractor's related schedule has been incorporated accurately, including the duration of activities and labor and equipment loading. Along with the baseline progress schedule, the Contractor shall also submit to the Engineer time-scaled resource histograms of the labor crafts and equipment classes to be utilized on the contract. The baseline schedule submittal shall include a 3 1/2 inch floppy diskette which contains the data files used to generate the schedule.

The Engineer shall be allowed 15 days to review and accept or reject the baseline project schedule submitted. Rejected schedules shall be resubmitted to the Engineer within 5 days, at which time a new 15 day review period by the Engineer will begin.

PROJECT SCHEDULE REPORTS.—Schedules submitted to the Engineer including baseline and interim baseline schedules shall include time scaled network diagrams in a layout format requested by the Engineer. The network diagrams submitted to the Engineer shall also be accompanied by four computer-generated mathematical analysis tabular reports for each activity included in the project schedule. The reports (8 1/2" x 11" size) shall include a network diagram report showing the activity columns only, a predecessor and successor report, a resource report, and a scheduling and leveling calculation report. The network diagram report shall include the following for each activity:

- 1) Activity number and description;
- 2) Activity codes;
- 3) Original, actual and remaining duration's;
- 4) Earliest start date (by calendar date);
- 5) Earliest finish date (by calendar date);
- 6) Actual start date (by calendar date);
- 7) Actual finish date (by calendar date);
- 8) Latest start date (by calendar date);
- 9) Latest finish date (by calendar date);
- 10) Identify activity calendar ID
- 11) Total Float and Free Float, in work days; and
- 12) Percentage of activity complete and remaining duration for incomplete activities.;

Network diagrams shall be sorted and grouped in a format requested by the Engineer reflecting the project breakdown per the Caltrans scope breakdown structure codes. They shall be drafted time scaled to show a continuous flow of information from left to right per the project sorting and grouping. E.g., the schedule, from top to bottom, shall be grouped by project milestones, submittals subgrouped by description, and the construction activities subgrouped by the scope breakdown structure. The primary paths of criticality shall be clearly and graphically identified on the networks. The network diagram shall be prepared on E-size sheets (36" x 48"), shall have a title block in the lower right-hand corner, and a timeline on each page. Exceptions to the size of the network sheets and the use of computer graphics to generate the networks shall be subject to the approval of the Engineer.

Schedule network diagrams and the tabular reports shall be submitted to the Engineer for acceptance in the following quantities:

- a) 2 sets of the Network Diagrams;
- b) 2 copies of the tabular reports (8 1/2" x 11" size); and
- c) 3 computer diskettes.

Should the baseline schedule or schedule update, submitted for acceptance, show variances from the requirements of the contract, the Contractor shall make specific mention of the variations in the letter of transmittal, in order that, if accepted, proper adjustments to the project schedule can be made. The Contractor will not be relieved of the responsibility for executing the work in strict accordance with the requirements of the contract documents. In the event of a conflict between the requirements of the contract documents and the information provided or shown on an accepted schedule, the requirements of the contract documents shall take precedence.

Each schedule submitted to the Engineer shall comply with all limits imposed by the contract, with all specified intermediate milestone and completion dates, and with all constraints, restraints or sequences included in the contract. The degree of detail shall include factors including, but not limited to:

- 1) Physical breakdown of the project;
- 2) Contract milestones and completion dates, substantial completion dates, constraints, restraints, sequences of work shown in the contract, the planned substantial completion date, and the final completion date;
- 3) Type of work to be performed, the sequences, and the major subcontractors involved;
- 4) All purchases, submittals, submittal reviews, manufacture, tests, deliver, and installation activities for all major materials and equipment.
- 5) Preparation, submittal and approval of shop and working drawings and material samples, showing time, as specified elsewhere, for the Engineer's review. The same time frame shall be allowed for at least one resubmittal on all major submittals so identified in the contract documents;
- 6) Identification of interfaces and dependencies with preceding, concurrent and follow-on contractors, railroads, and utilities as shown on the plans or specified in the specifications;
- 7) Identification of each and every utility relocation and interface as a separate activity, including activity description and responsibility coding that identifies the type of utility and the name of the utility company involved.
- 8) Actual tests, submission of test reports, and approval of test results;
- 9) All start-up, testing, training, and assistance required under the Contract;
- 10) Punchlist and final clean-up;
- 11) Identification of any manpower, material, or equipment restrictions, as well as any activity requiring unusual shift work, such as double shifts, 6-day weeks, specified overtime, or work at times other than regular days or hours; and
- 12) Identification of each and every ramp closing and opening event as a separate one-day activity, including designation by activity coding and description that it is a north-bound, south-bound, east-bound, west-bound, and entry or exit ramp activity.

Each construction activity shall have a duration of not more than 20 working days, and not less than one working day unless permitted otherwise by the Engineer. All activities in the schedule, with the exception of the first and last activities, shall have a minimum of one predecessor and a minimum of one successor. The baseline schedule shall not attribute negative float to any activity. Float shall not be considered as time for the exclusive use of or benefit of either the State or the Contractor but shall be considered as a jointly owned, expiring resource available to the project and shall not be used to the financial detriment of either party. The Contractor shall not add job inefficiencies or weather days to a project calendar without prior approval by the Engineer. Any accepted schedule, revision or update having an early completion date shall show the time between the early completion date and the current Contract Completion Date as "project float".

The Contractor shall be responsible for assuring that all work sequences are logical and the network shows a coordinated plan for complete performance of the work. Failure of the Contractor to include any element of work required for the performance of the contract in the network shall not relieve the Contractor from completing all work within the time limit specified for completion of the contract. If the Contractor fails to define any element of work, activity or logic, and the omission or error is discovered by either the Contractor or the Engineer, it shall be corrected by the Contractor at the next monthly update or revision of the schedule.

WEEKLY SCHEDULE MEETINGS.—The Engineer and the Contractor shall hold weekly scheduling meetings to discuss the near term schedule activities, to address any long-term schedule issues, and to discuss any relevant technical issues. The Contractor shall develop a rolling 3-week schedule identifying the current week and a 2-week look ahead. It shall provide sufficient detail to address all activities to be performed and to identify issues requiring engineering action or input. Also, the Engineer shall maintain a critical item list identifying each issue, the project impact, the responsible party, and a scheduled resolution date. The list shall be developed with input from the Contractor and shall prioritize each issue in order to mitigate any schedule or cost impact to the project.

MONTHLY UPDATE SCHEDULES.—The Contractor shall submit a Monthly Update Schedule to the Engineer once in each month. The proposed update schedule prepared by the Contractor shall include all information available as of the 20th calendar day of the month, or other date as established by the Engineer. A detailed list of all proposed schedule changes such as logic, duration, lead/lag, forecast completion date, additions and deletions shall be submitted with the update.

The monthly update schedule submitted to the Engineer shall be accompanied by a Schedule Narrative Report. The Schedule Narrative Report shall describe the physical progress during the report period, plans for continuing the work during the forthcoming report period, actions planned to correct any negative float, and an explanation of potential delays or problems and their estimated impact on performance, milestone completion dates, forecast completion date, and the overall project completion date. In addition, alternatives for possible schedule recovery to mitigate any potential delay or cost increases shall be included for consideration by the Engineer. The report shall follow the outline set forth below:

Contractor's Schedule Narrative Report Outline:

- 1) Contractor's Transmittal Letter
- 2) Work completed during the period
- 3) Description of the current critical path
- 4) Description of problem areas
- 5) Current and anticipated delays
 - a) Cause of the delay
 - b) Corrective action and schedule adjustments to correct the delay
 - c) Impact of the delay on other activities, milestones, and completion dates
- 6) Changes in construction sequences
- 7) Pending items and status thereof
 - a) Permits
 - b) Change Orders
 - c) Time Extensions
 - d) Non-Compliance Notices
- 8) Contract completion date(s) status
 - a) Ahead of schedule and number of days
 - b) Behind schedule and number of days
- 9) Include updated Network Diagram and Reports

The Contractor shall provide to the Engineer a 3 1/2" electronic disk of the schedule, together with printed copies of the network diagrams and tabular reports described under "Project Schedule Reports", and the Schedule Narrative Report.

The monthly update of the schedule shall be for the period from the last update to the current cut-off date, and for the remainder of the project. The current period's activities shall be reported as they actually took place and designated as actually complete, if actually completed, in the schedule updates.

Portions of the network diagram on which all activities are complete need not be reprinted and submitted in subsequent updates. However, the electronic disk file of the submitted schedule and the related reports shall constitute a clear record of progress of the work from award of contract to final completion.

The Contractor will be permitted to show a forecast completion date on the schedule updates and revisions. The Engineer may use the updates and revisions, and other information available, in evaluating the effect of changes, delays, or time savings on the critical path and the accepted schedule current at the time to determine if there is an applicable adjustment of time, if any, to any target date or completion date due to the changes, delays, or time savings.

On a date determined by the Engineer, the Contractor shall meet with the Engineer to review the monthly schedule update. At the monthly progress meeting, the Contractor and the Engineer will review the updated schedule and will discuss the content of the Narrative Report. The Engineer shall be allowed 15 days after the meeting to review and accept or reject the update schedule submitted. Rejected schedules shall be resubmitted to the Engineer within 10 days, at which time a new 7-day review period by the Engineer will begin. All efforts shall be made between the Engineer and the Contractor to complete the review and the approval process prior to the next update schedule cutoff date. To expedite the process a second meeting between the Engineer and the Contractor shall be held.

SCHEDULE REVISIONS.—If the Contractor desires to make a change to the accepted schedule, the Contractor shall request permission from the Engineer in writing, stating the reasons for the change, and proposed revisions to activities, logic and duration. The Contractor shall submit for acceptance an analysis showing the effect of the revisions on the entire project. The analysis shall include:

- 1) An updated schedule not including the revisions. The schedule shall have a data date just prior to implementing the proposed revisions and include a project completion date;
- 2) A revised schedule that includes the proposed revisions. The schedule shall have the same data date as the updated schedule and include a project completion date;
- 3) A narrative explanation of the revisions and their impact to the schedule; and
- 4) Computer files of the updated and revised schedules.

The Engineer will provide a response within 10 days. No revision to the accepted baseline schedule or the schedule updates shall be made without the prior written approval of the Engineer.

The Engineer will request the Contractor to submit a proposed revised schedule within 15 days when:

- a) there is a significant change in the Contractor's operations that will affect the critical path;
- b) the current updated schedule indicates that the contract progress is 30 days or more behind the planned schedule, as determined by the Engineer; or
- c) the Engineer determines that an approved or anticipated change will impact the critical path, milestone or completion dates, contract progress, or work by other contractors.

The Engineer shall be allowed 15 days to review and accept or reject a schedule revision. Rejected schedule revisions shall be revised and resubmitted to the Engineer within 15 days, at which time a new 15 day review period by the Engineer will begin. Only upon approval of a change by the Engineer shall it be reflected in the next schedule update submitted by the Contractor.

SCHEDULE TIME EXTENSION REQUESTS.—When the Contractor requests a time extension due to contract change orders or delays, the Contractor shall submit to the Engineer a written Time Impact Analysis illustrating the influence of each change or delay on the current contract completion date or milestone completion date, utilizing the current accepted schedule. Each Time Impact Analysis shall include a fragnet demonstrating how the Contractor proposes to incorporate the Change Order or delay into the current schedule. The fragnet shall include the sequence of new and existing activity revisions that are proposed to be added to the accepted baseline project schedule or current schedule in effect at the time the change or delay is encountered, to demonstrate the influence of the delay and the proposed method for incorporating the delay and its impact into the schedule.

Each Time Impact Analysis shall demonstrate the estimated time impact based on the events of delay, the anticipated or actual date of the contract change order work performance, the status of construction at that point in time, and the event time computation of all activities affected by the change or delay. The event times used in the analysis shall be those included in the latest update of the current schedule in effect at the time the change or delay was encountered.

Time extensions will be granted only to the extent that equitable time adjustments for the activity or activities affected exceed the total or remaining float along the critical path of activities at the time of actual delay, or at the time the contract change order work is performed. Float time is not for the exclusive use or benefit of the Engineer or the Contractor, but is an expiring resource available to all parties as needed to meet contract milestones and the contract completion date. Time extensions will not be granted nor will delay damages be paid unless:

- a) the delay is beyond the control and without the fault or negligence of the Contractor and its subcontractors or suppliers, at any tier; and,
- b) the delay extends the actual performance of the work beyond the applicable current contract completion date and the most recent date predicted for completion of the project on the accepted schedule update current as of the time of the delay or as of the time of issuance of the contract change order.

Time Impact Analyses shall be submitted in triplicate within 15 days after the delay occurs or after issuance of the contract change order.

Approval or rejection of each Time Impact Analysis by the Engineer will be made within 15 days after receipt of the Time Impact Analysis, unless the review is delayed by subsequent meetings and negotiations. A copy of the Time Impact Analysis approved by the Engineer shall be returned to the Contractor and the accepted schedule revisions illustrating the influence of the contract change orders or delays shall be incorporated into the project schedule during the first update after approval.

FINAL SCHEDULE UPDATE.—Within 15 days after the acceptance of the contract by the Director, the Contractor shall submit a final update of the schedule with actual start and actual finish dates for all activities. This schedule submission shall be accompanied by a certification, signed by an officer of the company and the Contractor's Project Manager stating "To the best of my knowledge, the enclosed final update of the project schedule reflects the actual start and completion dates of the activities contained herein."

EQUIPMENT AND SOFTWARE.—The Contractor shall provide for the State's exclusive possession and use a complete computer system specifically capable of creating, storing, updating and producing CPM schedules. Before delivery and setup of the computer system, the Contractor shall submit to the Engineer for approval a detailed list of all computer hardware and software the Contractor proposes to furnish. The minimum computer system to be furnished shall include the following:

- 1) Complete computer system, including keyboard, mouse, 17 inch color SVGA monitor (1,024x768 pixels), latest industry-available Intel Pentium processor chip, or equivalent, or better;
- 2) Computer operating system software, compatible with the selected processing unit, for Windows 95 NT 4.0 Workstation With Service Pack 3;
- 3) Minimum one hundred twenty-eight (128) megabytes of random access memory (RAM);
- 4) A 4 gigabyte minimum hard disk drive, a 1.44 megabyte 3 1/2 inch floppy disk drive, a lomega Jaz drive with two 1-gigabyte minimum cartridges, and 32x speed minimum CD-ROM drive, Network Card - 3COM 10/100 Case-T Ethernet PCI and 56 k modem;
- 5) A color-ink-jet type, B-size plotter compatible with the selected system capable of printing fully legible, time-scaled charts, network diagrams and reports. The plotter shall have the capability of being connected to or networked with a minimum of 5 computers.
- 6) A manual parallel cable switching device, with connecting cables, allowing the user to alternate printing between the plotters.
- 7) General software shall be latest versions of Microsoft Office Professional and McAfee VirusScan virus protection. The general software shall be compatible with the hardware provided.
- 8) Schedule Analyzer Pro, a software to compare two different Primavera schedule updates to analyze their similarities and differences. The latest version for Windows NT.
- 9) A color-ink-jet plotter with a minimum 8 36 megs RAM, capable of 300 dots per inch color, 600 dots per inch monochrome, or equivalent plotter capable of printing fully legible, time scaled charts, and network diagrams, in four colors, with a minimum size of 36 inches by 48 inches (E size) and is compatible with the selected system. All required plotter paper and ink cartridges throughout the contract.
- 10) CPM software shall be Primavera Project Planner, the latest version for Windows NT.

The computer hardware and software furnished shall be compatible with that used by the Contractor for the production of the CPM progress schedule required by the Contract, and shall include original instruction manuals and other documentation normally provided with the software.

The Contractor shall furnish, install, set up, maintain and repair the computer hardware and software ready for use at a location determined by the Engineer. The hardware and software shall be installed and ready for use by the first submission of the baseline schedule. The Contractor shall provide 24 hours of formal training for the Engineer in the use of the hardware and software to include schedule analysis, reporting, resource and cost allocations.

All computer hardware and software furnished shall remain the property of the Contractor and shall be removed by the Contractor upon acceptance of the contract when no claims involving contract progress are pending. When claims involving contract progress are pending, computer hardware or software shall not be removed until the final estimate has been submitted to the Contractor.

PAYMENT.—Progress schedule (critical path) will be paid for at a lump sum price. The contract lump sum price paid for progress schedule (critical path) shall include full compensation for furnishing all labor, materials (including computer hardware and software), tools, equipment, and incidentals; and for doing all the work involved in preparing, furnishing, updating and revising CPM progress schedules; maintaining and repairing the computer hardware; and training the Engineer in the use of the computer hardware and software; as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Payments for progress schedule (critical path) will be made as follows:

Interim baseline schedule accepted, then 10 percent payment for progress schedule (critical path) will be made.

Baseline schedule accepted, then 10 percent payment for progress schedule (critical path) will be made.

Monthly update schedules accepted, then 75 percent payment for progress schedule (critical path) will be made equally for each update.

Final schedule update accepted, then 5 percent payment for progress schedule (critical path) will be made.

The Department will retain an amount equal to 25 percent of the estimated value of the work performed during the first estimate period in which the Contractor fails to submit an interim baseline, baseline, revised or updated CPM schedule conforming to the requirements of this section, as determined by the Engineer. Thereafter, on subsequent successive estimate periods the percentage the Department will retain will be increased at the rate of 25 percent per estimate period in which acceptable CPM progress schedules have not been submitted to the Engineer. Retention's for failure to submit acceptable CPM progress schedules shall be additional to all other retention's provided for in the contract. The retention for failure to submit acceptable CPM progress schedules will be released for payment on the next monthly estimate for partial payment following the date that acceptable CPM progress schedules are submitted to the Engineer.

The adjustment provisions in Section 4-1.03, "Changes," of the Standard Specifications, shall not apply to the item of progress schedule (critical path). Adjustments in compensation for the project schedule will not be made for any increased or decreased work ordered by the Engineer in furnishing project schedules.

10-1.09A ELECTRONIC MOBILE DAILY DIARY SYSTEM DATA DELIVERY

Attention is directed to Sections 5-1.10, "Equipment and Plants," and 7-1.01A(3), "Payroll Records," of the Standard Specifications, and these special provisions.

The Contractor shall submit to the Engineer a list of each piece of equipment and its identifying number, type, make, model and rate code in accordance with the Department of Transportation publication entitled "Labor Surcharge and Equipment Rental Rate" which is in effect on the date upon the work is performed, and the names, labor rates and work classifications for all field personnel employed by the Contractor and all subcontractors in connection with the public work, together with such additional information as is identified below. This information shall be updated and submitted to the Engineer weekly through the life of the project.

This personnel information will only be used for this mobile daily diary computer system and it will not relieve the Contractor and subcontractors from all the payroll records requirements as required by Section 7-1.01A(3), "Payroll Records," of the Standard Specifications.

The Contractor shall provide the personnel and equipment information not later than 11 days after the contract award for its own personnel and equipment, and not later than 5 days before start of work by any subcontractor for the labor and equipment data of that subcontractor.

The minimum data to be furnished shall comply with the following specifications:

DATA CONTENT REQUIREMENTS

1. The Contractor shall provide the following basic information for itself and for each subcontractor that will be used on the contract:

Company name.	Alphanumeric; up to 30 characters.
Federal tax ID	Alphanumeric; up to 10 characters.
State contractor license	Alphanumeric; up to 20 characters.
Company type (prime or sub)	Alphanumeric; up to 10 characters.
Address (line 1).	Alphanumeric; up to 30 characters.
Address (line 2).	Alphanumeric; up to 30 characters.
Address (city).	Alphanumeric; up to 30 chars.
Address (2-letter state code).	Alphanumeric; up to 2 characters.
Address (zip code)	Alphanumeric; up to 14 characters.
Contact name.	Alphanumeric; up to 30 characters
Telephone number (with area code).	Alphanumeric; up to 20 characters.
Company code: short company name.	Alphanumeric; up to 10 characters.
Type of work (Department-supplied codes)	Alphanumeric; up to 30 characters
DBE status (Department-supplied codes)	Alphanumeric; up to 20 characters.
Ethnicity for DBE status (Department-supplied codes).	Alphanumeric; up to 20 characters.
List of laborers to be used on this contract (detail specified below).	
List of equipment to be used on this contract (detail specified below).	

For example, one such set of information for a company might be:

XYZ CONSTRUCTION, INC.
94-2991040
AL1649T
SUB
1240 9TH STREET
SUITE 600
OAKLAND
CA
94612
JOHN SMITH
(510) 834-9999
XYZ
PAVING
MBE
BLACK

2. The Contractor shall provide the following information for each laborer who will be used on the contract:

Company code (as defined above).	Alphanumeric; up to 10 characters.
Employee ID	Alphanumeric; up to 10 characters.
Last name.	Alphanumeric; up to 20 characters.
First name.	Alphanumeric; up to 15 characters.
Middle name.	Alphanumeric; up to 15 characters.
Suffix	Alphanumeric; up to 15 characters
Labor trade (Department-provided codes).	Alphanumeric; up to 10 characters.
Labor classification (Department-provided codes).	Alphanumeric; up to 10 characters.
Regular hourly rate.	Alphanumeric; up to (6,2)
Overtime hourly rate.	Alphanumeric; up to (6,2)
Double-time hourly rate	Alphanumeric; up to (6,2)
Standby hourly rate.	Alphanumeric; up to (6,2)
Ethnicity (Department-provided codes).	Alphanumeric; up to 20 characters.
Gender.	Alphanumeric; up to 1 characters.

For example, one such set of information might be:

XYZ
1249
GONZALEZ
HECTOR
VINCENT
JR.
OPR
JNY
22.75
30.25
37.75
0.00
HISPANIC
M

3. The Contractor shall provide the following information for each piece of equipment that will be used on the contract:

Company code (as defined above).	Alphanumeric; up to 10 characters.
Company's equipment ID number.	Alphanumeric; up to 10 characters.
Company's equipment description.	Alphanumeric; up to 60 characters.
Equipment type (from Department ratebook).	Alphanumeric; up to 60 characters.
Equipment make (from Department ratebook).	Alphanumeric; up to 60 characters.
Equipment model (from Department ratebook).	Alphanumeric; up to 60 characters.
Equipment rate code (from Department ratebook).	Alphanumeric; up to 10 characters
Regular hourly rate.	Alphanumeric; up to (6,2)
Overtime hourly rate.	Alphanumeric; up to (6,2)
Standby hourly rate	Alphanumeric; up to (6,2)
Idle hourly rate.	Alphanumeric; up to (6,2)
Rental flag.	Alphanumeric; up to 1 character.

For example, one such set of information might be:

XYZ
B043
CAT TRACTOR D-6C
TRACC
CAT
D-6C
3645
28.08
25.27
14.04
0.00
N

DATA DELIVERY REQUIREMENTS

1. All data described in "Data Requirements" of this section shall be delivered to the Department electronically, on 3 1/4" floppy disks compatible with the Microsoft Windows operating system. The Contractor shall provide a weekly disk and hard copy of the required correct updated personnel and equipment information for the Contractor and all the subcontractors and verified correct by the Engineer.

2. Data of each type described in the previous section (contractor, labor, and equipment information) will be delivered separately, each type in one or more files on floppy disk. Any given file may contain information from one contractor or from multiple contractors, but only one type of data (contractor, labor, or equipment information).

3. The file format for all files delivered to Caltrans shall be standard comma-delimited, plain text files. This type of file (often called "CSV") is the most standard type for interchange of formatted data; it can be created and read by all desktop spreadsheet and desktop database applications. Characteristics of this type of file are:

- All data is in the form of plain ASCII characters.
 - Each row of data (company, person, equipment) is delimited by a carriage return character.
 - Within rows, each column (field) of data is delimited by a comma character.
4. The files shall have the following columns (i.e., each row shall have the following fields):
- Contractor info: 15 columns (fields) as specified in "Data Requirements #1", above.
 - Labor info: 14 columns (fields) as specified in "Data Requirements #2", above.
 - Equipment info: 12 columns (fields) as specified in "Data Requirements #3", above.

For each type of file, columns (fields) must be in the order specified under "Data Requirements", above. All columns (fields) described under "Data Requirements" must be present for all rows, even if some column (field) values are empty. The first row of each file may contain column headers (in plain text) rather than data, if desired.

5. Column (field) contents must conform to the data type and length requirements described in the "Data Requirement" section, above. In addition, column (field) data must conform to the following restrictions:

- All data shall be uppercase.
- Company type shall be either "PRIME" or "SUB".
- Labor trade and classification codes must conform to a list of standard codes that will be supplied by Department.
- Contractor type of work codes and DBE status codes must conform to a list of standard codes that will be supplied by Department.
- Ethnicity codes must conform to standard codes that will be supplied by Department.
- Data in the "gender" column must be either "M" or "F".
- Data in the "rental equipment" column must be either "Y" or "N".
- Equipment owner's description may not be omitted. (The description, together with the equipment number, is how the equipment will be identified in the field.) Include manufacturer, rated capacity & trade description
- Equipment type, make, model, and ratebook code shall conform to the Department of Transportation Publication entitled "Labor Surcharge and Equipment Rental Rate", which is in effect on the date upon the work is performed. If the equipment in question does not have an entry in the book then alternate, descriptive entries may be made in these fields as directed by the Engineer.

6. The name of each file must indicate its contents, e.g., "XYZlab.csv" for laborers from XYZ Company, Inc. Each floppy disk supplied to Caltrans must be accompanied by a printed list of the files it contains with a brief description of the contents of each file.

PAYMENT

Payment for providing electronic mobile daily diary computer system data delivery will be made on a lump sum basis. The lump sum bid price for electronic mobile daily diary computer system data delivery will be made according to the following schedule:

The Contractor will receive not more than 5 per cent per month of the total bid price for electronic mobile daily diary computer system data delivery.

The contract lump sum price paid for electronic mobile daily diary computer system data delivery shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in electronic mobile daily diary computer system data delivery as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

After the completion of the work, 100 per cent payment will be made for electronic mobile daily diary computer system data delivery less the permanent deduction, if any, for failure to deliver complete weekly electronic mobile daily diary computer system data in each month.

The Department will retain an amount equal to 25 percent of the estimated value of the work performed during the first estimate period in which the Contractor fails to submit electronic mobile daily diary computer system data delivery conforming to the requirements of this section, as determined by the Engineer. Thereafter, on subsequent successive estimate periods the percentage the Department will retain will be increased at the rate of 25 percent per estimate period in which acceptable electronic mobile daily diary computer system data have not been submitted to the Engineer. Retention's for failure to submit acceptable electronic mobile daily diary computer system data shall be additional to all other retention's provided for in the contract. The retention for failure to submit acceptable electronic mobile daily diary computer system data will be released for payment on the next monthly estimate for partial payment following the date that acceptable electronic mobile daily diary computer system data is submitted to the Engineer.

The adjustment provisions in Section 4-1.03, "Changes," of the Standard Specifications, shall not apply to the item of electronic mobile daily diary computer system data delivery. Adjustments in compensation for electronic mobile daily diary computer system data delivery will not be made for any increased or decreased work ordered by the Engineer in furnishing electronic mobile daily diary computer system data.

Chart No. 1 Multilane Lane Requirements																									
Location: On northbound Rte. 680 - From south of Marina Vista Off-ramp to north of Marina Vista Off-ramp.																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	
Mondays through Thursdays																									
Fridays																									
Saturdays																									
Sundays																									
Day before designated legal holiday																									
Designated legal holidays																									
Legend:																									
<div><div></div> One lane open in direction of travel</div>																									
<div><div></div> Two adjacent lanes open in direction of travel</div>																									
<div><div></div> No lane closure allowed</div>																									
REMARKS:																									

Chart No. 1A Multilane Lane Requirements																									
Location: On northbound Rte. 680 - From north of Marina Vista Off-ramp to north of Mococo Overhead.																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays																									
Fridays																									
Saturdays																									
Sundays																									
Day before designated legal holiday																									
Designated legal holidays																									
Legend:																									
<div><div></div>One lane open in direction of travel</div>																									
<div><div></div>Two adjacent lanes open in direction of travel</div>																									
<div><div></div>No lane closure allowed</div>																									
REMARKS:																									

10-1.32 AGGREGATE BASE

Aggregate base shall be Class 3 and shall conform to the provisions in Section 26, "Aggregate Bases," of the Standard Specifications and these special provisions.

The first paragraph of Section 26-1.02B, "Class 3 Aggregate Base," of the Standard Specifications is amended by adding the following sentences:

Aggregate may include or consist of material processed from reclaimed asphalt concrete, portland cement concrete, lean concrete base, cement treated base, glass or a combination of any of these materials. Aggregate base incorporating reclaimed glass shall not be placed at locations where surfacing will not be placed over the aggregate base.

The fourth paragraph in Section 26-1.02A, is amended by adding the following sentence:

Untreated reclaimed asphalt concrete and portland cement concrete will not be considered to be treated with lime, cement or other chemical material for purposes of performing the Durability Index test.

At the option of the Contractor, the aggregate for Class 3 aggregate base shall conform to either the 37.5-mm maximum or the 19-mm maximum grading.

Aggregate for Class 3 aggregate base shall be clean and free from organic matter and other deleterious substances and shall conform to the following grading and quality requirements:

Grading Requirements (Percentage Passing)				
Sieve Sizes	37.5-mm Maximum		19-mm Maximum	
	Operating Range	Contract Compliance	Operating Range	Contract Compliance
50-mm	100	100	-----	-----
37.5-mm	90 - 100	87 - 100	-----	-----
25-mm	-----	-----	100	100
19-mm	50 - 85	45 - 90	90 - 100	87 - 100
4.75-mm	25 - 45	20 - 50	35 - 60	30 - 65
600- μ m	10 - 25	6 - 29	10 - 30	5 - 35
75- μ m	2 - 11	0 - 14	2 - 11	0 - 14

Quality Requirements		
Tests	Operating Range	Contract Compliance
Sand Equivalent	25 Min.	22Min.
Resistance (R-value)	-----	78 Min.

The requirements of the fourth paragraph of Section 26-1.02A shall apply to Class 3 aggregate base.

The requirements of the last 4 paragraphs in Section 26-1.02A, "Class 2 Aggregate Base," of the Standard Specifications shall apply to Class 3 aggregate base.

ENGINEER'S ESTIMATE**04-006094**

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
41 (S)	208731	200 MM CORRUGATED HIGH DENSITY POLYETHYLENE PIPE CONDUIT	M	22		
42	250401	CLASS 4 AGGREGATE SUBBASE	M3	14 400		
43	260301	CLASS 3 AGGREGATE BASE	M3	9130		
44	290201	ASPHALT TREATED PERMEABLE BASE	M3	2380		
45	390152	ASPHALT CONCRETE	TONN	19 100		
46	390165	ASPHALT CONCRETE (OPEN GRADED)	TONN	2290		
47	394001	PLACE ASPHALT CONCRETE DIKE	M	1530		
48	394002	PLACE ASPHALT CONCRETE (MISCELLANEOUS AREA)	M2	51		
49	397001	ASPHALTIC EMULSION (PAINT BINDER)	TONN	15		
50 (F)	510060	STRUCTURAL CONCRETE, RETAINING WALL	M3	150		
51 (F)	510413	CLASS 1 CONCRETE (BOX CULVERT)	M3	3.6		
52 (F)	510502	MINOR CONCRETE (MINOR STRUCTURE)	M3	112		
53 (S-F)	520103	BAR REINFORCING STEEL (RETAINING WALL)	KG	6948		
54 (S-F)	520107	BAR REINFORCING STEEL (BOX CULVERT)	KG	370		
55	015895	TIMBER CAP	EA	4		
56	620905	300 MM ALTERNATIVE PIPE CULVERT (TYPE A)	M	4		
57	620906	300 MM ALTERNATIVE PIPE CULVERT (TYPE B)	M	58		
58	620910	450 MM ALTERNATIVE PIPE CULVERT (TYPE A)	M	150		
59	620911	450 MM ALTERNATIVE PIPE CULVERT (TYPE B)	M	330		
60	620914	600 MM ALTERNATIVE PIPE CULVERT (TYPE A)	M	380		

ENGINEER'S ESTIMATE

04-006094

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
101	016119	TIME RELATED OVERHEAD	WDAY	420		
102	016120	ELECTRONIC MOBILE DAILY DIARY SYSTEM DATA DELIVERY	LS	LUMP SUM	LUMP SUM	
103	999990	MOBILIZATION	LS	LUMP SUM	LUMP SUM	

TOTAL BID: _____

